

was always found in one of his sons, or a slave, or a malefactor. His period of rule was also curtailed from a year to a few days each year.

Now the details of the crucifixion present some resemblance to the treatment of the mock king in the Sacæa. Both victims were clothed in fine raiment and crowned as kings, and afterwards scourged and crucified. This, Mr. Frazer thinks, is not a chance resemblance. The Jewish feast of Purim may have been derived from Zag-muk, which in turn may possibly be identified with the Sacæa; and he suggests that the Jews in the time of Christ may have every year at the feast of Purim compelled a condemned criminal to play the part of Haman and be put to death, in the same way as their later descendants destroyed effigies of him. Briefly, Mr. Frazer's theory is that Christ was put to death as one of these yearly victims. That the crucifixion took place at Passover, *i.e.* a month after the Feast of Purim, he thinks may be explained by supposing that Christian tradition for purposes of edification shifted the date of the crucifixion from Purim in order to make the sacrifice coincide with the annual sacrifice of the Passover lamb. He offers the alternative suggestions that the Jews may have sometimes celebrated Purim at about the time of the Passover (*i.e.* in Nisan) in consequence of its derivation from the Babylonian Zag-muk, which was held in Nisan; or, finally, the Jews may have spared the victim of the feast of Purim for one month, when his death would occur at Passover. Thus, according to Mr. Frazer, Christ was crucified and Barabbas was released as part of the passion-play performed each year by the Jews at Purim. They took the parts of Haman and Mordecai respectively, and at the end of the performance the one who played Haman was crucified, and the other, who personated Mordecai, was allowed to go free. Following out his theory, Mr. Frazer suggests that the name Barabbas, "Son of the Father," was not the name of an individual, but was the title given to one or both of the actors in the play. Similarly, the description of Christ's triumphal ride into Jerusalem before his death, and the account of the raid he made afterwards upon the stalls of the money-changers in the temple, he thinks may perhaps be traced to those arbitrary rights over property which it has been customary to accord to such temporary kings during their brief period of rule. The hero of the drama, in fact, may have been "no more than a moral teacher whom the fortunate accident of his execution invested with a crown not merely of a martyr, but of a god."

Such is Mr. Frazer's theory, and we confess to feeling that, unlike the rest of his book, this section contains a great deal of theory and very little evidence. That the rites of the late Sacæa were identical with those of the earlier Babylonian Zag-muk is pure assumption; and that a Babylonian king was at one time annually slain is unsupported by any evidence, whereas had this been the case the custom must have left some trace in the Babylonian literature. Prof. Jensen's identification of the principal personages mentioned in Esther with Elamite and Babylonian deities is, to say the least, a little fanciful, and still more fanciful is Mr. Frazer's improvement on his theory; it is hard to recognise in the story a reflection of a passion play. Finally, the question

of dates is a real difficulty of which not one of Mr. Frazer's alternative theories successfully disposes. After careful study we think it easier to explain the resemblance of Christ's crucifixion to the rites of the Sacæa as the result of coincidence rather than to accept the artificial theory we have summarised. Moreover, with a strange absence of logic Mr. Frazer claims that his theory sheds "fresh light on some of the causes which contributed to the remarkably rapid diffusion of Christianity in Asia Minor"; as a matter of fact, it does the reverse. The political significance of Christ's martyrdom and the prominence it consequently gave his following form the simplest explanation of the rapid spread of Christianity. The more ordinary and normal the crucifixion is represented the harder it is to understand the problem; Mr. Frazer's theory reduces the crucifixion to an annual event.

We have dealt in some detail with the two chief novelties of the second edition of the work; our criticism of one theory, however, should not be taken as detracting in any way from the general value of the book, which will always form a storehouse of facts for the student of religion, and which will surely influence for many years the work of those who concern themselves with that wide and attractive field of study.

#### THE ISLAND OF CELEBES.

*Über die geologische Geschichte der Insel Celebes auf Grund der Thierverbreitung.* Von Dr. Paul Sarasin und Dr. Fritz Sarasin. Pp. vi + 169; 15 plates. (Wiesbaden: Kreidel, 1901.)

THE island of Celebes, as is well known, is comparable in a metaphorical sense to one of the floating islands of antiquity; it has not definitely come to rest in either the Australian or the Oriental region. By some authorities its marsupial inhabitants are held to outweigh in importance its likeness in other respects to the islands of the Malayan archipelago, and it is associated with Mr. Sclater's Australian region; others, again, place it as definitely with the Oriental region; while its anomalous and intermediate character has led not a few to fatal hesitation and to consequent abandonment of the problem. The authors of the volume before us dismiss at once, and with some brusqueness, all consideration of this matter. The chief problem of geographical distribution is for them not "whether Celebes belongs to the Oriental or to the Australian region, but what are the land connections, and of what epoch, which must be assumed to account for the condition of its fauna to-day?" This attitude of mind shows a healthy reaction against the elaborate method adopted by many zoogeographers of late years. The detailed planning and plotting out of the globe into a complicated series of regions, subregions and provinces is not, in the opinion of the present writer, of great usefulness save in so far as it allows of a rapid and perhaps graphic method of indicating the range of a particular animal. The two authors proceed further to observe that it is better to select, for the purposes of such problems as are presented by Celebes, species and not genera of animals; and this on the perfectly reasonable grounds that while the limits of genera are most diversely regarded, there is not, at least, so much difference of opinion as to

the limits of a species. They are thus a safer indication of both likenesses and differences in two faunas. Mr. Sclater, some years ago, proposed the term of "lipo-type" to express a negative state of affairs; a genus or species which was, as it were, unaccountably absent from a given region was thus denominated.

There is no doubt that this expression was wanted and that it did emphasise important zoogeographical fact. Nevertheless, it must be used with care, especially with regard to smaller and less conspicuous creatures. The Drs. Sarasin instance the case of the land planarians of Celebes. It was written so recently as 1891 that not a single species of this group of Platyhelminthes had been found in Celebes. Now we are acquainted with quite a number of forms, so much so that Celebes is the second richest island of the whole Malayan archipelago in these worms. We are glad to notice that the authors carefully distinguish between artificial introduction of species and introduction by natural means. To this matter attention has not, perhaps, been sufficiently drawn, and the wide range of many small creatures which has been used as an argument for their antiquity and has been generally made use of by the zoogeographer has not always the real value that has been attached to it. After due sifting of such fraudulent claimants to indigeneity the authors are, roughly speaking, disposed to do what has been mocked at—to demand a continent to explain the range of a beetle. Avoiding exaggeration, we can assert that the authors are not at all impressed by the floating *log deus ex machinâ*; they think that similar inhabitants on opposite sides of a sea generally imply a former land connection.

It will be noted from the few observations made that the authors preface their detailed consideration of the fauna of Celebes and neighbouring islands with some remarks of a general nature, which might perhaps have been rather more expanded if the work had not been of so special a character. The animal groups made use of by the authors are chiefly the molluscs, reptiles and amphibians; birds, mammals and land planarians are not neglected. The fact that there are more peculiar species of molluscs than of reptiles and amphibians is commented upon; this the authors attribute to the greater mobility of the two vertebrate groups. In discussing all zoological characteristics of Celebes it must be borne in mind, as is duly pointed out on p. 128, that the island itself first rose from the waves after Eocene times, for a great mass of the solid rock of which it is built is Eocene chalk. The view of its subsequent history which the fauna appears to indicate is that it first showed itself above the water in the Miocene and that during the Pliocene it was in connection with neighbouring islands, from which it became subsequently and at different times detached. It is justly described, therefore, as a "fragment of a Miocene continent." One important exception, however, exists to the statement that Celebes has been in the past in connection with the other islands of the surrounding seas. The authors point out that there is not a single species of animal known to be common to Celebes and Borneo and not at the same time found in some of the other islands; this, as is justly inferred, seems to indicate that Celebes can never have been connected by a land bridge with Borneo directly,

though, of course, it probably was indirectly by way of Java, on the one hand, and possibly (though the authors think not) the Philippines on the other. The Macassar strait thus represents a tract of ocean which has been water before and since the appearance of Celebes upon the earth's surface. On the other hand, the supposed deep channel on the south intervening between Bali and Lombok is, as it appears from Prof. Max Weber's soundings, to be given up, since the greatest depth then ascertained to exist was merely 312 metres. This volume is of extreme interest as a detailed attempt to reconstruct from a comparison of faunas the past geological history of a group of islands. It is abundantly illustrated with maps, and concludes with an historical review of the literature of the subject and a list of memoirs and books.

F. E. B.

#### ENGINEERING EDUCATION.

*Proceedings of the Eighth Annual Meeting of the Society for the Promotion of Engineering Education held in New York City, July 2-3, 1900.* Vol. viii. Pp. xxviii + 377. (New York: Engineering News Publishing Company, 1900.) Price 2.50 dollars.

WHEN technical education is so much in the air, and so many consider that it is a cure for all our industrial troubles, it is interesting to see what another nation thinks of its own system of education. In America there exists a society for the promotion of engineering education, and we have the pleasure of reading their eighth volume of *Proceedings*—that of last year. The members of this association are those who are, or have been, engaged in responsible positions in the work of engineering instruction. There is a regular meeting for several days once every year, the whole of the papers which are read dealing with education as applied to industry.

The association seems to be most prosperous, both financially and in point of numbers; it is clear that meeting together of teachers is most useful to both teachers and students, and it is to be hoped that in this country a similar society may be formed, which would do much to educate public opinion as to what technical education exactly means. At present very few people understand what is wanted to be taught and whom to teach it to; an individual, even of the most impressive powers and personality, cannot speak with the same authority as a society which has only one end, namely, to improve our educational methods.

The presidential address of Prof. Ira D. Barker, dealing with the position of engineering education in the United States at the end of the century, is most instructive in showing what a strong hold technical instruction has on the other side of the Atlantic.

At the end of 1899 there were eighty-nine institutions offering full courses in engineering, in some cases seven different courses being open to students, the numbers attending full courses being 9679; of these colleges no less than 98 per cent. require the four years' course before graduation.

These schools must not in any way be considered as falling into the same category as our technical schools, which mainly address themselves to evening work for the